

DETAILED ACTION

Response to Amendment

1. This action is responsive to an Amendment filed 9/23/2009. Claims **1, 3, 4, 6-9, 11, 12, 14-17**, and **19-28** are pending. Claims **1, 8, 9, 11, 12, 14-17, 19, 20**, and **22** are amended. Claims **2, 5, 10, 13, 18, 29**, and **30** are canceled. The examiner hereby withdraws the objections to claims **8, 19**, and **20** in light of the amendment.

Response to Arguments

2. Applicant's arguments regarding the 35 USC 101 rejection of claims **9, 11-12, 14-16**, and **22**, filed 9/23/2009, have been fully considered, but they are not persuasive.

3. Applicant's arguments regarding claims **1, 9**, and **17**, filed 9/23/2009, have been fully considered, but they are not persuasive.

Regarding the rejection of claims **9, 11-12**, and **14-16** under 35 USC 101, the applicant argues that the claims as amended are directed towards statutory subject matter under 35 USC 101. The examiner respectfully disagrees. As stated in the Office Action below, Applicant's specification recites that the machine-readable medium may include a mechanism that provides (i.e., stores and/or transmits) information in a form readable by a machine (p. 7, paragraph 22 of Applicant's specification). Applicant's specification further states that the code or instructions may be represented by carrier-wave signals, infrared signals, digital signals, and by other like signals (p. 7, paragraph 22 of Applicant's specification). As such, Applicant's specification seems to indicate that the instructions can be stored on a signal. The examiner notes that a claim

directed to a signal or law of nature *per se* does not appear to be a process, machine, manufacture, or composition of matter. The examiner recommends that the applicant amend the claims to recite a “non-transitory machine-readable storage medium” in order to clarify that the claims are not directed towards a signal.

Regarding claims 1, 9, and 17, the applicant argues that Davis et al. chooses the words that fit in a designated grid cell based on the words that have previously been used in a shortened title and that if there are no stored shortened titles, the titles in Davis et al. are manually shortened by an editor. Applicant further specifically argues that there is no teaching or suggestion in Davis et al. that the editor determines a plurality of essential words of a program title, based on a meaning of the program title, such that the plurality of essential words convey the meaning of the program title. The examiner respectfully disagrees. As noted in the Office Action mailed 6/23/2009, Davis et al. discloses an interactive computer program used to edit program listings data (col. 17, l. 44-46). A data processor determines how much space is required to display a title based on its character length (col. 18, l. 1-3). If the data processor determines that a full title requires too much space to fit into one or more grid cells and if the title has not been previously edited, the title is presented to an editor using a display device connected to the data processor. The editor is then queried to alter the title, so that it will fit in the allotted space (col. 18, l. 12-21). Figure 11a illustrates that the editor found the words “BEST,” “SHOW,” and “TODAY,” as being meaningful for display, but in reduced 60 and 30 minute grid slots found the words “BEST” and “SHOW” as being more meaningful than “TODAY” (Fig. 11a). The edits are then stored in a library of shortened titles (col. 18, l. 35-43; col. 19, l. 38-43; & Figs. 10A, 11a, 11b).

The next time the program title needs to be edited, the data processor again analyzes the listings data to determine what grid size listings are needed for each title and determines how much space is required to display the title based on its character length (col. 17, l. 63-67 & col. 18, l. 1-3). If the data processor determines that a full title requires too much space to fit into one or more grid cells, the title is compared with a stored library of shortened titles to determine if the title had previously been shortened while editing another listings database (col. 18, l. 35-39). In this case it has, since the title was previously edited as mentioned above. The data processor is programmed to retrieve the longest title that will fit in the designated grid cell (col. 19, l. 26-27). As illustrated in Fig. 11a, for a 90 minute grid cell, the words “THE,” “BEST,” “SHOW,” and “TODAY” had been previously determined to be the most important words to keep in a 90 minute cell. As such, the examiner interprets these words as “essential” words as claimed. If the grid cell will not fit the 90 minute cell title, the data processor will retrieve the 60 minute or 30 minute title from the database instead.

Regardless of whether editing manually or from the database, the examiner notes that this editing is being performed based on a meaning of the program title. That is, an editor is either directly choosing the words of the program title to keep for the differently sized program cells, or has chosen the words previously when they were stored in the database. Davis et al. discloses that the benefits of the text fit system are illustrated in Fig. 11. Figure 11a shows an example of a grid cell using the disclosed text fit system as compared with Figure 11b that shows a conventional system that merely truncates the listing if there is not adequate space for display of the complete title (col. 19, l. 39-44). In not merely truncating the title, the editor is determining which words to keep based on the program title. This is the motivation behind Davis et al.

providing a text fit system. Davis et al. states that some systems simply cut off the description of a program without abbreviating it in any way so the user is unable to determine the subject matter of the program (col. 2, l. 8-25). Davis et al. states that there is a need for an improved technique of displaying program information in order to make program schedule grids more readable (col. 2, l. 49-51). As such, the examiner maintains that the editor of Davis et al. is editing the program title “based on a meaning of the program title, wherein the plurality of essential words convey the meaning of the program title,” as currently claimed.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims **9, 11, 12, 14-16, and 22** are rejected under 35 U.S.C. 101, because the claimed invention is directed to non-statutory subject matter.

Referring to claims **9, 11, 12, 14-16, and 22**, the examiner notes that the claim is directed towards a machine-readable storage medium; however, Applicant’s specification states that the machine-readable medium may include a mechanism that provides (i.e., stores and/or *transmits*) information in a form readable by a machine such as computer or digital processing device (italicized for emphasis)(p. 7, paragraph 22 of Applicant’s specification). Paragraph 22 further states that the code or instructions may be represented by carrier-wave signals, infrared signals, digital signals, any by other like signals (p. 7, paragraph 22 of Applicant’s specification). The examiner notes that a claim directed to a signal or law of nature *per se* does not appear to be a process, machine, manufacture, or composition of matter. The examiner recommends that the

applicant amend the claims to recite a “non-transitory machine-readable storage medium.” See **MPEP 2106.01** for guidance.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims **1, 9, 17, 21-23, 25, 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Fleischer.

Referring to claims **1, 9, and 17**, Davis et al. discloses a method/machine-readable storage medium/apparatus comprising:

- determining at least two meaningful words in a program title of an electronic program guide, wherein each of the at least two meaningful words appears at least once in a database, the at least two meaningful words including a first word and a second word (if a title has not been previously edited and the title is too long for its grid size, an editor edits the title to fit the grid. Figure 11a illustrates that the editor found the words “BEST,” “SHOW,” and “TODAY,” as being meaningful for display, but in reduced 60 and 30 minute grid slots found the words “BEST” and “SHOW” as being more meaningful than the word “TODAY.” The edits are then stored in a library of shortened titles)(col. 18, l. 12-21, 35-43; col. 19, l. 38-43; & Figs. 10A, 11a, 11b);
- selectively removing a less descriptive word from the program title (col. 18, l. 12-21);

- determining a plurality of essential words of the program title based on a meaning of the program title, wherein the plurality of essential words convey the meaning of the program title (col. 17, l. 60-67 & Fig. 11a);
- determining the number of characters necessary to display the plurality of essential words (col. 18, l. 1-3); and
- removing an essential word if the number of characters necessary to display the plurality of essential words is greater than the specified number of characters, to create an abbreviated program title (col. 18, l. 35-43 & Figs. 10A, 10B); and
- displaying the abbreviated program title in a program title field of the electronic program guide (Figs. 5a-5c, 7a-7c, & 11a).

Davis et al. further discloses a library of shortened titles for determining if a title has been previously shortened (col. 18, l. 35-45). Davis et al. does not specifically disclose determining that the first word appears in the database at a greater frequency than the second word and determining that the first word is a less descriptive word in response to determining the first word appears in the database with a greater frequency than the second word. Fleischer discloses condensing text by determining words and phrases of greatest significance. Fleischer discloses determining how frequently words and word phrases appear and determining that words and word phrases that appear less frequently have greater significance (col. 1, l. 55-59; col. 3, l. 18-22, 27-30, 40-50; & col. 4, l. 53-64). For example, if the noun phrase “black cat” appears 20 times in a document and the noun phrase “green cat” appears 15 times in the document, the phrase “green cat” is maintained in the summarized text, since it is not as frequently used and is determined to be more suggestive of the document’s subject. It would have been obvious to one

of ordinary skill in the art at the time that the invention was made to include a step of determining meaningful words from the database of Davis et al. to automatically remove words on the basis of frequency appearance, such as that taught by Fleischer in order to provide automatic means for providing a sufficient synopsis of material for a reader (Fleischer col. 1, l. 25-31).

Further referring to claim 17, Davis et al. discloses a memory 115 (col. 17, l. 49-50 & Fig. 1).

Referring to claims 21-23, the combination of Davis et al. and Fleischer teaches the method/machine-readable storage medium/apparatus of claims 1, 9, and 17, respectively, wherein in addition to removing the less descriptive word, the method further includes:

- parsing the text of the program title (Davis et al. col. 17, l. 48-50, 60-67; col. 18, l. 1-3, 13-21; & Figs. 10A, 11a);
- determining at least one nonessential, nonrelational word of the program title (Davis et al. col. 18, l. 12-21; col. 19, l. 38-43; & Figs. 10A, 11a); and
- removing the nonessential, nonrelational word from the program title (Davis et al. Figs. 10A & 11a).

Referring to claim 25, the combination of Davis et al. and Fleischer teaches the apparatus of claim 17, wherein the apparatus is a head end (Davis et al. Fig. 1).

Referring to claim 28, the combination of Davis et al. and Fleischer teaches the method of claim 1, wherein the database includes a database of program titles (Davis et al. col. 18, l. 35-43).

8. Claims **3, 4, 8, 11, 12, 16, 19, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Fleischer and further in view of Kudrolli et al.

Referring to claims **3, 11, and 19**, the combination of Davis et al. and Fleischer teaches the method/machine-readable storage medium/apparatus of claims 1, 9, and 17, respectively. The combination of Davis et al. and Fleischer further teaches parsing the text of the program title (Davis et al. col. 17, l. 48-50, 60-67; col. 18, l. 1-3, 13-21; & Figs. 10A, 11a), determining at least one nonessential, nonrelational word of the program title (Davis et al. col. 18, l. 12-21; col. 19, l. 38-43; & Figs. 10A, 11a), and removing the nonessential, nonrelational word from the program title (Davis et al. Figs. 10A & 11a). The combination of Davis et al. and Fleischer does not specifically teach:

- determining at least one relational word of the program title; and
- replacing the at least one relational word with a representative character.

Kudrolli et al. discloses replacing the word “and” with the character “&” in order to cope with display space constraints in computer software (Fig. 20). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Davis et al. and Fleischer to include replacing the word “and” with the character “&,” such as that taught by Kudrolli et al. in order to make program guides more useful for a viewer and more pleasant to watch (Davis et al. col. 2, l. 38-41).

Referring to claims **4, 12, and 20**, the combination of Davis et al., Fleischer, and Kudrolli et al. teaches the method/machine-readable storage medium/apparatus of claims 1, 11, and 17, respectively, further parsing the text of the program title (Davis et al. col. 17, l. 48-50, 60-67; col. 18, l. 1-3, 13-21; & Figs. 10A, 11a), determining at least one nonessential, nonrelational word of

the program title (Davis et al. col. 18, l. 12-21; col. 19, l. 38-43; & Figs. 10A, 11a), removing the nonessential, nonrelational word from the program title (Davis et al. Figs. 10A & 11a), determining at least one relational word of the program title (Kudrolli et al. Fig. 20), and replacing the at least one relational word with a representative character (Kudrolli et al. Fig. 20). The combination of Davis et al., Fleischer, and Kudrolli et al. further teaches including abbreviating at least one of the plurality of essential words if the number of characters necessary to display the plurality of essential words is greater than the specified number of characters (Kudrolli et al. col. 7, l. 48-55).

Referring to claims **8** and **16**, the combination of Davis et al., Fleischer, and Kudrolli et al. teaches that an essential word occurring most frequently in a database is removed (Kudrolli et al. col. 7, l. 40-47).

9. Claims **6**, **14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Fleischer and further in view of Knauft et al.

Referring to claims **6** and **14**, the combination of Davis et al. and Fleischer teaches the method/machine-readable storage medium of claims 21 and 22, respectively. The combination of Davis et al. and Fleischer does not specifically teach that the at least one nonessential, nonrelational word comprises all of the words selected from the group consisting of adverbs, adjectives, prepositions, and articles. Knauft et al. discloses an electronic document retrieval system that removes adjectives or adverbs from the document prior to presenting the document to an information retrieval (IR) engine. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Davis et al. and

Fleischer to include removing adjectives or adverbs from an electronic document prior to its presentation such as that taught by Knauft et al. in order to provide information to a system that is almost as usable as the original (Knauft et al. col. 2, l. 31-33).

NOTE: The USPTO considers the applicant's "selected from the group consisting of" language to be anticipated by any reference containing any of the subsequent corresponding elements.

10. Claims **7, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Fleischer, further in view of Kudrolli et al., and still further in view of Hejna, Jr.

Referring to claims **7** and **15**, the combination of Davis et al., Fleischer, and Kudrolli et al. teaches the method/machine-readable storage medium of claims 4 and 12, respectively. The combination of Davis et al., Fleischer, and Kudrolli et al. does not specifically teach that the at least one essential word comprises all of the words selected from the group consisting of subject, object nouns, and verbs. Hejna, Jr. discloses removing articles and adjectives from conceptual information contained within TV broadcasts to provide output comprised only of nouns and noun phrases (col. 14, l. 16-19 & col. 16, l. 46-51). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the combination of Davis et al., Fleischer, and Kudrolli et al. to include providing output comprised only of nouns and noun phrases, such as that taught by Hejna, Jr. in order to make a program guide more useful to a viewer and more pleasant to watch (Davis et al. col. 2, l. 38-41).

NOTE: The USPTO considers the applicant's "selected from the group consisting of" language to be anticipated by any reference containing any of the subsequent corresponding elements.

11. Claims **24, 26, 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. in view of Fleischer and further in view of Wehmeyer.

Referring to claim **24**, the combination of Davis et al. and Fleischer teaches the apparatus of claim 17. The combination of Davis et al. and Fleischer further teaches that the program listings data are edited through the use of a processor executing a text fit interactive computer program (Davis et al. col. 17, l. 44-46). The combination of Davis et al. and Fleischer also teaches that program listings can be listed in an interactive program guide implemented on a cable converter box, the converter box containing processor and memory capabilities (Davis et al. col. 20, l. 1-4). The program schedule information is downloaded and stored in the converter box memory and can be controlled locally (Davis et al. col. 20, l. 18-21, 24-26). The combination of Davis et al. and Fleischer does not specifically teach that the text fit system is implemented on a set-top box. Wehmeyer discloses an interface for locally customizing program guide information containing program descriptions (see Abstract) in a cable converter box (col. 10, l. 51-62). Generic program guide information, including program identifiers, is received and stored in the cable converter box (col. 11, l. 11-22). The user may edit text in a cell of the electronic program guide (EPG) by highlighting a cell, selecting an edit text mode key, and entering the desired text. For example, the user may change the text "THE GOLDEN ERA" to "THE ERA" (col. 16, l. 50-64 & Fig. 8). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the text fit system of the combination of Davis et al. and Fleischer to be implemented on the cable converter box, rather than the head end, such as that taught by Wehmeyer in order to provide users with ways to customize the program guide list (Wehmeyer col. 2, l. 13-15).

Referring to claims 26 and 27, the combination of Davis et al., Fleischer, and Wehmeyer teaches the apparatus of claim 24, wherein a satellite transmits a signal to a satellite dish connected to the set-top box (Davis et al. col. 5, l. 26-28), which is connected to a television, and wherein the television is the display device (Davis et al. col. 21, l. 4-8 & Fig. 12).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VAN HANDEL whose telephone number is (571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James Sheleheda/
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